

# ARNOLD ARBORETUM

## HARVARD UNIVERSITY



### BULLETIN

OF

### POPULAR INFORMATION

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**The Pinetum.** After two seasons of abundant rain the conifers are in good condition this autumn, and the Pinetum is now perhaps the most interesting part of the Arboretum to visit. At one time or another every conifer which had any chance of surviving has been tried in the Arboretum, and some useful information on the value of the different exotic and American species, with the exception of the new introductions from China, as ornamental trees in this climate has been obtained from the Arboretum experiments. Considering how generally unfavorable the New England climate is for trees of this class, the large number that succeed here is surprising, although it must be remembered that in this climate many conifers, especially Spruces and Firs, are often at their best when not more than forty or fifty years old and that as they grow older they gradually fail and lose their value as ornamental trees. This is true of the so-called Colorado Blue Spruce (*Picea pungens*), which is still one of the most popular conifers in the northern United States, where it is propagated and planted in immense numbers, in spite of the fact that it early loses its value as an ornamental tree. The Blue Spruce is very hardy, is easily raised and grows rapidly; young plants are of good shape and dense habit with their lower branches resting on the ground. There are two forms, one with dull green and the other with blue leaves, and the latter especially appeals to persons who are fond of unusual looking and sensational plants. For the nurseryman the Blue Spruce has everything to recommend it, easy germination of the seed, quick growth and unusual beauty in the young plants, and therefore a certainty of a quick sale. For the planter looking for something more impor-

tant than a plant for a city garden or a small suburban yard this tree has proved a failure. It is not surprising for *Picea pungens*, growing in small groves near streams in the valleys of the Rocky Mountains of Colorado, long before it attains its full size is a thin, scrawny, miserable looking tree with a few short branches only near the top of the stem. This tree was discovered in 1862; seed was planted the following year in the Harvard Botanic Garden, and one of the plants raised at that time is still alive in the Arboretum on the southern slope of Bussey Hill where it is kept as a warning for planters who are deceived by the beauty of young plants of the Blue Spruce.

**Picea Engelmannii.** This tree as it grows nearly up to the timber line of the central Rocky Mountains, where it once formed great forests, is one of the handsomest of the Spruces with its narrow spire-like crown, soft gray-green foliage and tall trunk covered with bright red scaly bark. It was also discovered in 1862 and what are probably the largest specimens in cultivation are in the Arboretum Pinetum. Until two or three years ago these were narrow, perfect pyramids with the lower branches resting on the ground; then the lower branches began to die gradually without apparent cause. This has continued, and the stems of some of the trees are now bare of branches for six or eight feet from the ground, and their beauty as specimen trees is ruined.

**Picea canadensis.** This, the White Spruce of British North America, is a very hardy, fast-growing tree here, and is one of the handsomest of the Spruces which can be grown in this region; but the climate of eastern Massachusetts is evidently too warm for it and after it is thirty or forty years old it becomes thin and unsightly.

**Picea rubra.** This is the Appalachian timber Spruce and retains here its beauty longer than the White Spruce, for it is a native of Massachusetts and ranges southward along the mountains to the high Carolina peaks. It is a handsome tree with dark green leaves, but it probably grows more slowly than any other large coniferous tree, and it is not easy to establish. For these reasons it will probably never be a favorite tree with nurserymen.

**Picea omorika** and **P. orientalis.** These are handsome and hardy trees, the former a native of the Balkan peninsula, and the latter of the Caucasus. No weakness has yet been found here in these trees except that they too often lose their leaders from the attacks of the borer which so often destroys the leaders of the White Pine.

**Picea Glehnii.** What the future may have in store for this tree here, which is a native of northern Japan and Saghalien, no one can predict as it has been in cultivation in the Arboretum for only twenty-two years. The trees now grow rapidly, are perfectly hardy and show no signs of failure of any sort. The best specimens here are now about eighteen feet high.

**Picea jezoensis.** This is the most widely distributed of the species of eastern Asia; ranging as it does from the Amoor region to Manchuria, Korea, and to northern and central Japan. This is the only Spruce in all that region with flat leaves like those of *P. omorika* and



*P. sitchensis* of our northwest coast. It has been sometimes called *Picea ajanensis*, *P. microsperma* and *P. hondoensis*. In Great Britain, where it is usually incorrectly called *Picea Alcockiana*, it grows remarkably well and has been recommended as a timber tree for forest planting. In a collection of exotic trees made in 1870 by Dr. George R. Hall in Warren, Rhode Island, there is a specimen of this tree from sixty to seventy feet high with a trunk forty-six and a half inches in diameter and branches spreading on the ground. In this Arboretum and in the Hunnewell Pinetum at Wellesley this tree has grown badly, losing many of its branches and soon becoming unsightly.

**Picea bicolor.** This is one of the rarest of the Japanese conifers, and as it grows in the Hunnewell Pinetum it is now the handsomest of all the Spruce trees which can be grown in this climate. Mr. Hunnewell's trees are now about forty feet high with the lower branches resting on the ground and covering a space from thirty-five to forty feet across and with perfectly straight stems. This beautiful tree is probably better known by its incorrect name of *Picea Alcockiana*. It is one of the rarest of the Japanese conifers in cultivation and it is to be regretted there are no good specimens now in this Arboretum.

**Picea Abies.** This unfortunately is the correct name for the so-called Norway Spruce of Europe which has generally been known as *Picea excelsa*. Fifty or sixty years ago this tree was very generally planted in southern New England where it has not proved a success as an ornamental tree as it begins to fail at the top when about thirty years old and then soon becomes ragged and unsightly. In some parts of Virginia and in the Middle States this is a better tree than it is in Massachusetts. In the National Cemetery at Gettysburg in Pennsylvania there are magnificent specimens of the Norway Spruce in as perfect health and beauty as can be found anywhere.

**Firs.** The number of Fir trees that can be successfully grown in this climate for many years is not large. One of the handsomest here is the White Fir of western North America, *Abies concolor*. There are fine specimens of this beautiful tree in the Arboretum raised here from seed planted in 1874 and now about sixty feet high, with the lower branches resting on the ground, and solid masses of gray-green foliage. As handsome and as promising in this climate is the Japanese *Abies homolepis*, or, as it has been more often called, *Abies brachyphylla*. This is a large tree on the mountains of central Japan with dark green leaves silvery white on the lower surface and violet-purple cones. It has proved perfectly hardy in this climate. The largest specimen in the Hunnewell Pinetum is now fifty-five feet high with branches sweeping the ground. The Arboretum trees are smaller but already produce their handsome cones. A variety of this tree, (var. *umbellata*) with green cones and rather lighter-colored leaves is established in the Arboretum where it has grown rapidly, the largest specimen raised from seeds planted in 1891 being thirty-five feet high. *Abies cilicica* from Asia Minor and *A. cephalonica* from southeastern Europe are hardy trees in the Arboretum and now promise to grow here to a large size. *Abies Veitchii* from Japan is still a handsome tree in the

Arboretum but it is doubtful if it carries its beauty to old age. *A. amabilis* and *A. grandis* from northeastern North America are handsome young trees here, and *A. nobilis* from the same region just keeps alive here as a nearly prostrate shrub, although in Methuen, in the extreme northern part of this state, there are handsome and healthy specimens of this Fir nearly thirty feet high.

**Pines.** Among exotic Pines the three Japanese species, *Pinus parviflora*, *P. Thunbergii* and *P. densiflora*, have all grown well here in this climate for nearly thirty years and are still handsome and attractive trees of much promise. The Scotch Pine (*Pinus sylvestris*) and the Austrian Pine (*P. nigra*) are perfectly hardy and grow rapidly in this climate, but they are comparatively short-lived trees here and do not promise to be so valuable as the Japanese species. The White Pine of the Balkan peninsula (*Pinus peuce*) is very hardy here, producing its cones freely, and now promises to be a large and valuable tree. The Swiss Pine (*P. cembra*) is hardy but grows very slowly but it is possible that the form of this tree from central Siberia may prove more successful in this climate. The Asiatic representative of this Pine, *Pinus koraiensis*, from eastern Siberia, Korea and Japan, grows well here and produces its cones freely. Of the Pines of western America *Pinus flexilis* of the Rocky Mountain region grows slowly in the Arboretum but is healthy and perfectly hardy, as are the two White Pines, *P. Lambertiana*, the great Sugar Pine of California and Oregon, and *P. monticola* which ranges from Idaho to the coast of British Columbia and to the high Sierras of California.

**Callicarpa japonica.** Attention is again called to the group of these shrubs which are on the left-hand side of Azalea Path close to its entrance from the Bussey Hill Road. The leaves have fallen from the branches which are now covered with small violet-colored fruits which are produced in compact axillary clusters. The small pale pink flowers, which do not appear until after midsummer, are not conspicuous and the real beauty of this shrub is in the late and abundant fruit of a color that is not found on any other tree or shrub hardy in this climate. The largest and best plants in the group have been raised in the Arboretum from seeds sent here from Korea. There are three Chinese species of this genus in the collection, but it is too soon to speak with confidence of their value as garden plants.

**Cornus sanguinea.** This is now one of the conspicuous shrubs in the Arboretum, for the leaves are now the color of old Spanish leather which they will retain for some time longer and until they fall. This Cornel is a native of Siberia, and here in New England often grows ten or twelve feet high and forms a mass of stems which are often broader than the plant is high. The flowers are white in small compact clusters, and these are followed by nearly black fruit. The value, however, of this plant is found in its vigor and excellent habit, and in the color of the foliage in November. A large specimen can be seen in the Cornel Group at the junction of the Meadow and Bussey Hill Roads.

These Bulletins will now be discontinued until next spring.



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